



Environmental Quality Service Council IDEM Report – August 4, 2011

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Environmental Management



Presentation Outline

- IDEM 2011 Legislative Agenda and Results
- 25 Years of Progress
- Comparison of Region V States by U.S. EPA
- IDEM 2011 EQSC Report
- 2011 Goals and Challenges
- Air Quality and Asthma Trends



2011 IDEM Legislative Agenda

- IDEM Issuance of NPDES General Permits **SB 200**.
- Authorization to pursue delegation for U.S. ACE 404 and U.S. EPA UIC programs **SB 433**.
- Define duties and funding for SWMDs **EQSC**.
- EQSC study of funding for environmental programs **SB 433**.
- IDEM general bill that passed Senate last year **SB 433**.



25 Years of Progress

http://www.in.gov/idem/files/state_of_environment_2011.pdf



of Protecting Hoosiers and Our Environment



Indiana Department of Environmental Management

Air

Land

Water

Pollution Prevention



25th Anniversary
State of the Environment 2011

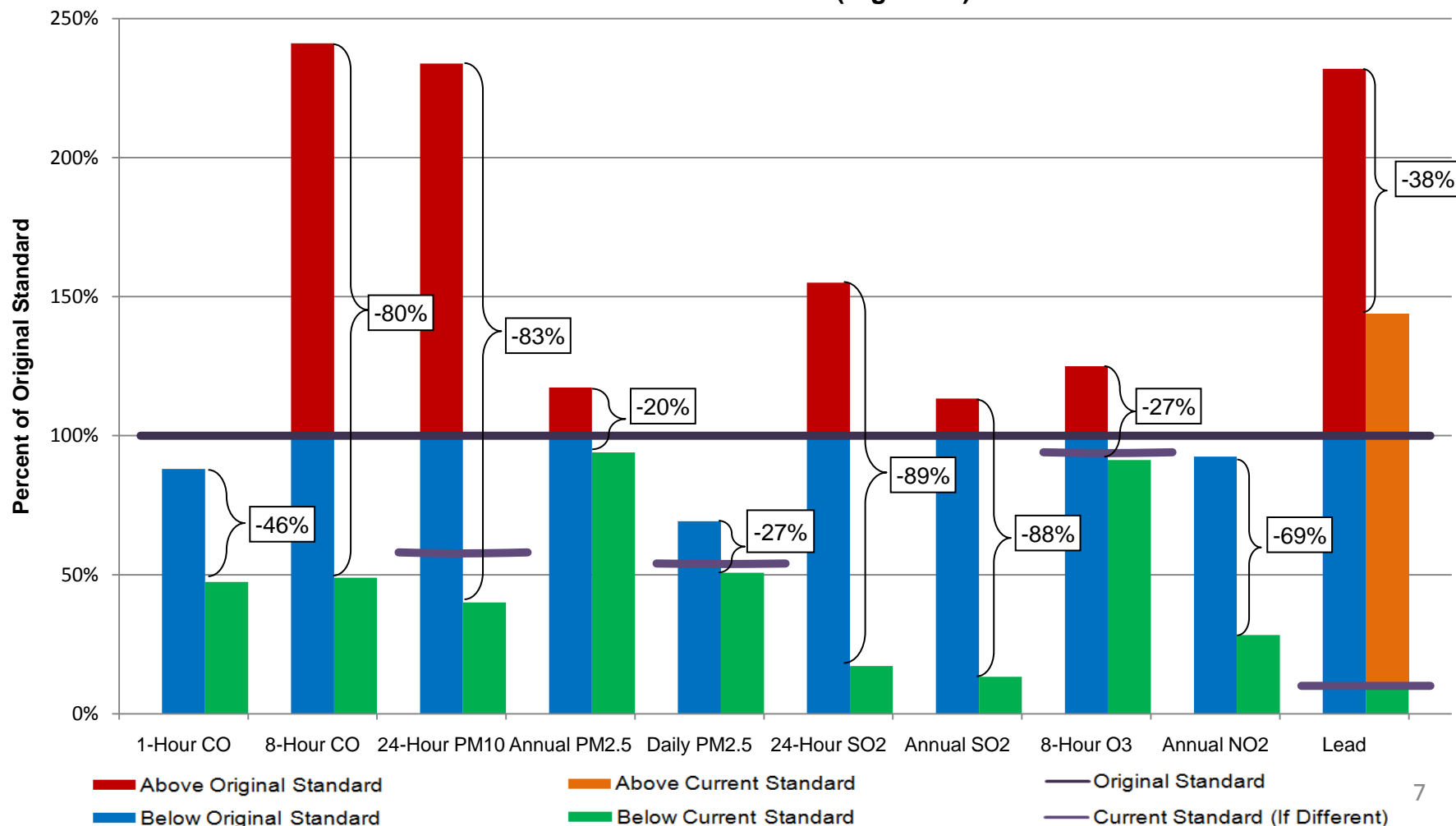


25 Years of Progress

- At the end of 2009, for the first time since ambient air quality standards were developed, all of Indiana met all of the health based ambient air quality standards (including the 0.075 ozone standard).
- During 2010, the new 0.15 microgram per cubic meter lead standard became effective and almost 700 people may be breathing air above that new standard. IDEM is working to make sure that those Hoosiers have clean air to breathe.
- Outdoor Hydronic Heater (formerly Outdoor Wood Fired Boiler) Rule effective May 18, 2011.
- Automotive mercury switch removal program.

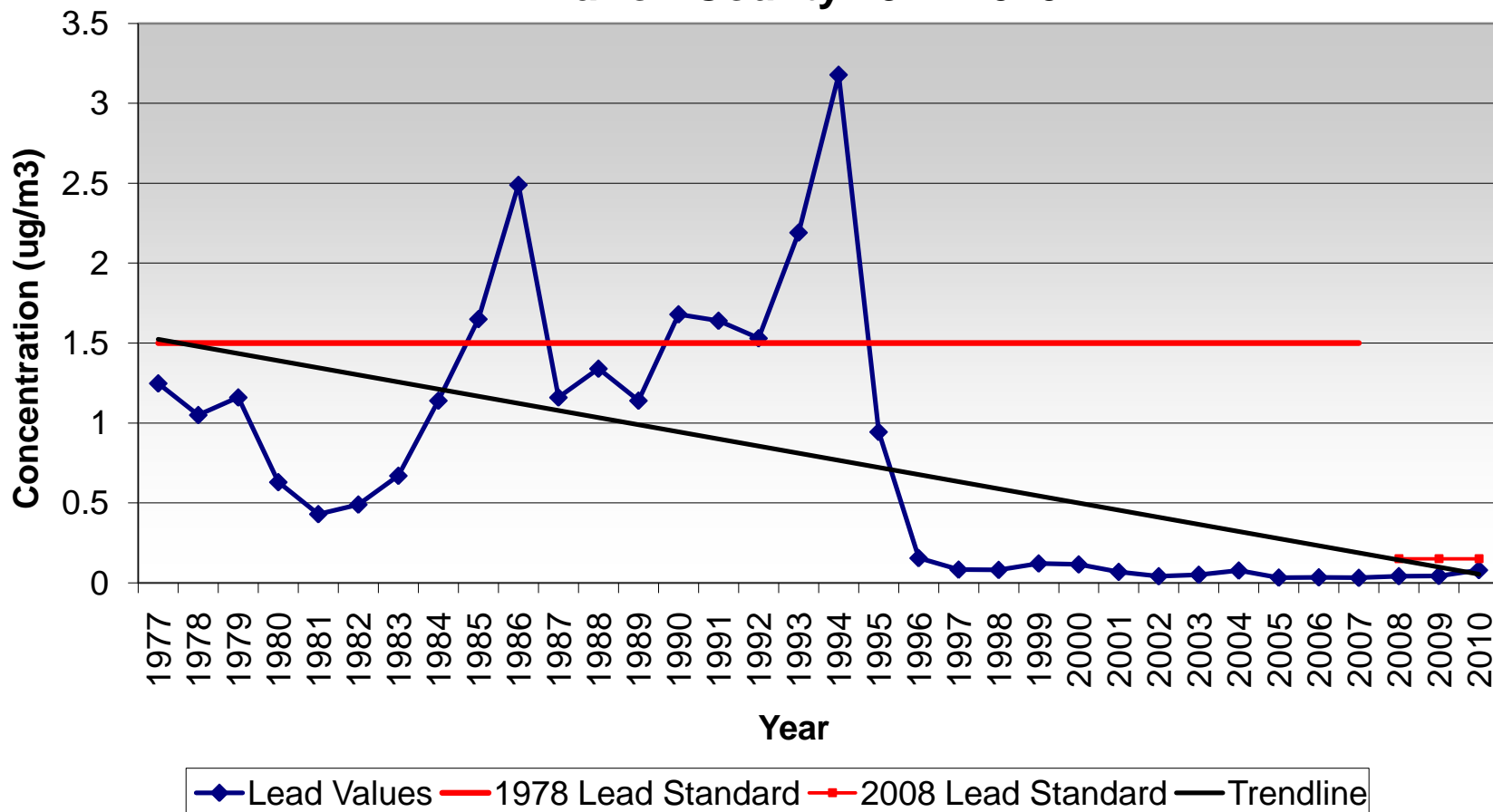


Percent Difference Between Highest Historical Monitored Concentration (Left Bar) and Highest Most Current Monitored Concentration (Right Bar) - Statewide





Lead Maximum Values Marion County 1977-2010





25 Years of Progress

- **Water Quality Improvements:**

- IDEM has assessed the water quality in 83% of Indiana's waters to identify areas in need of improvement.
- IDEM has used the 319 grant process to fund watershed improvement projects over the past five years that have prevented annual discharges of:
 - 500,508,000 pounds of sediment
 - 546,871 pounds of nitrogen
 - 332,270 pounds of phosphorus



25 Years of Progress

- **Water Quality Improvements:**

IDEM has documented the water quality improvements from these program efforts and removed the watersheds listed on the next page from the list of impaired waters.



25 Years of Progress

- **Water Quality Improvements:**

- Big Walnut Creek

http://www.in.gov/idem/nps/files/watershed_success_epa_bigwalnut.pdf

- Clifty Creek

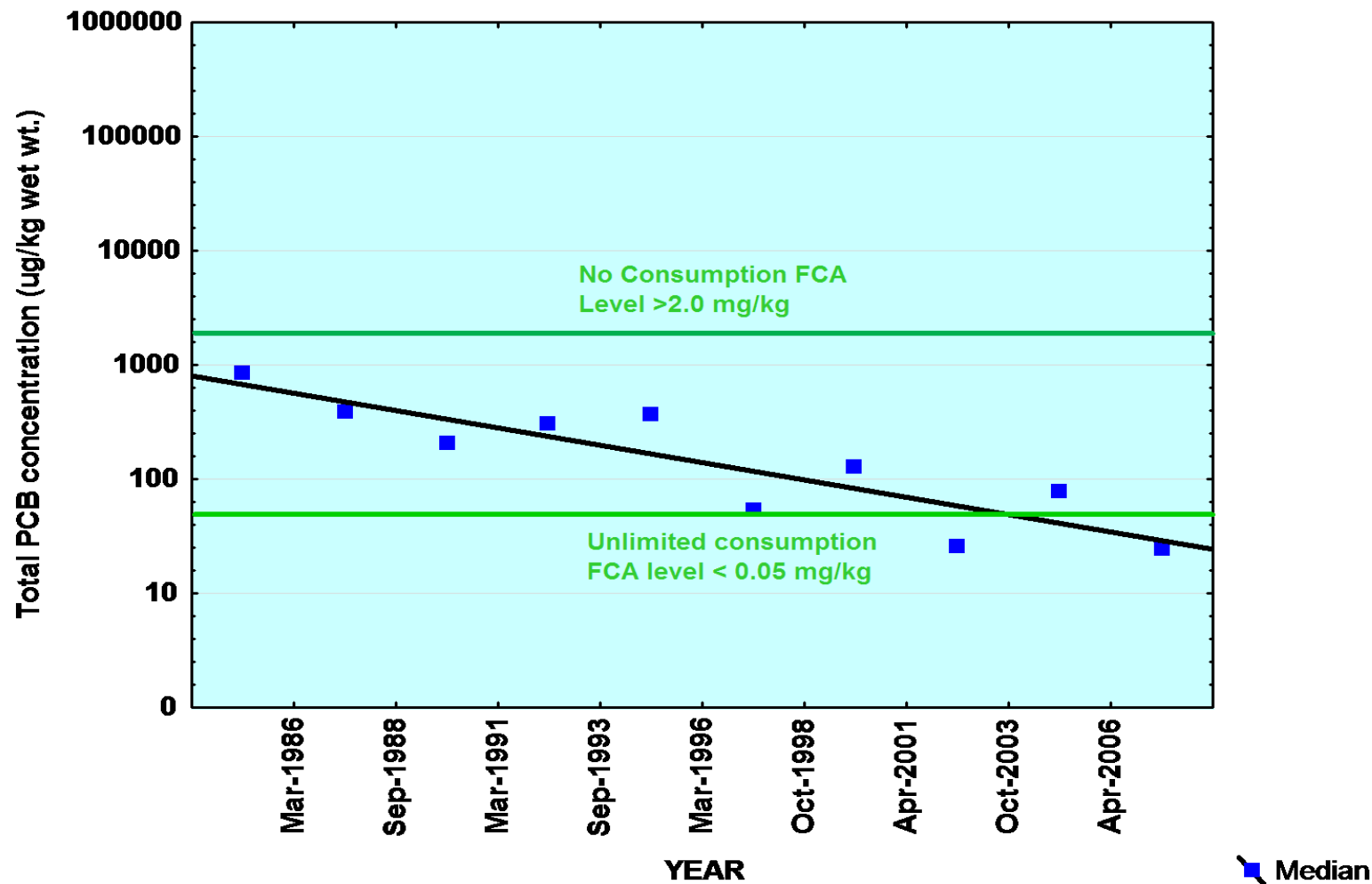
http://www.in.gov/idem/nps/files/watershed_success_epa_clifty.pdf

- Pigeon Creek

http://www.in.gov/idem/nps/files/watershed_success_epa_pigeon.pdf

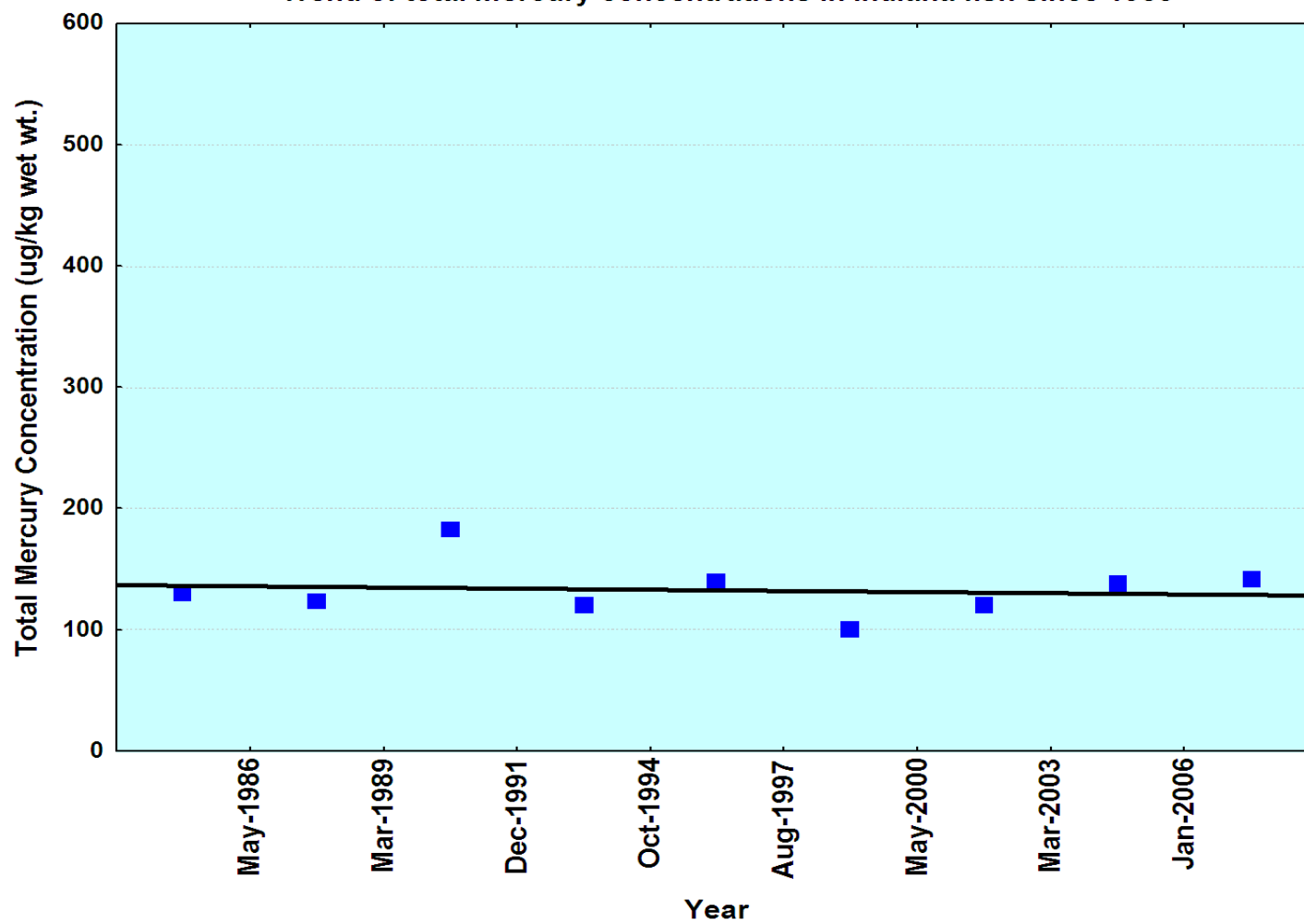


Trend of Total PCB in Indiana Fish 1983-2008





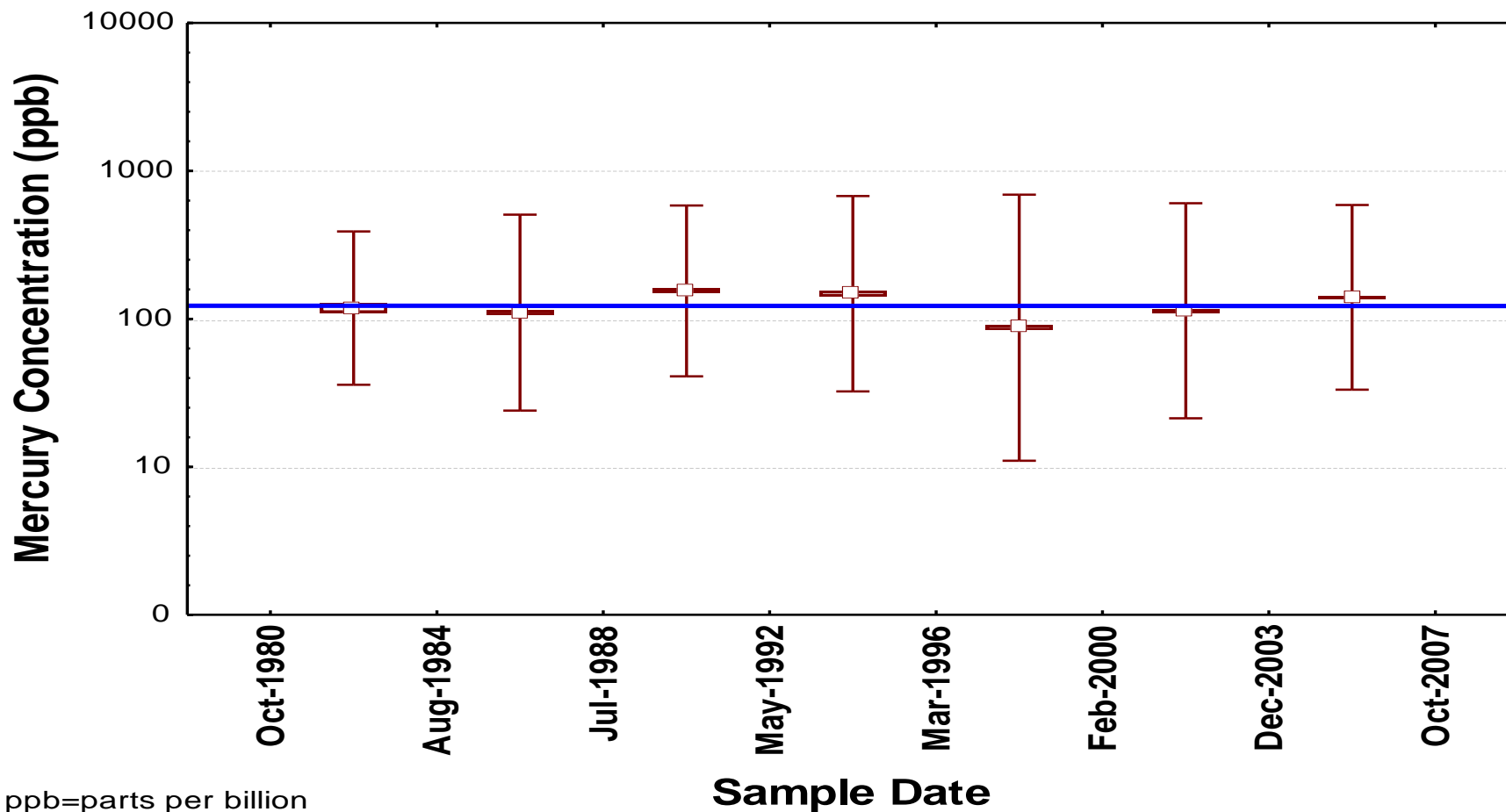
Trend of total mercury concentrations in Indiana fish since 1983



■ Median



Mercury Concentration in Indiana Fish 1983 - 2006





25 Years of Progress

- **Cleanup of Contaminated Sites:**

- Indiana has a fully funded Excess Liability Trust Fund to pay for petroleum clean ups from currently operated tanks.
- Indiana has issued an updated RISC Closure Guidance Document and is reviewing public comments.
- Exposure to hazardous constituents is under control at 58 of Indiana's 66 RCRA Corrective Action sites, while ground water contamination is under control at 55 of those 66 sites.



25 Years of Progress

- **Cleanup of Contaminated Sites:**

- Since 2005, Indiana has cleaned up more than 50,810,000 pounds of illegally dumped waste tires.
- All 1,269 tons of VX Agent stored at the Newport Chemical Agent Facility since 1969 has been safely destroyed. VX destruction started in May of 2005 and was completed in August 2008.



25 Years of Progress

- **Electronic Permits and Reporting**

- Virtual File Cabinet—electronic filing system with over 62,000,000 pages now online, about 433 boxes of old documents not yet in the system.
- TEMPO—Enterprise wide electronic integration of all IDEM information—part of the infrastructure to receive and process electronic permit applications and reports—scheduled to be fully operational in 2012.
- Digital Inspector—Still being rolled out.

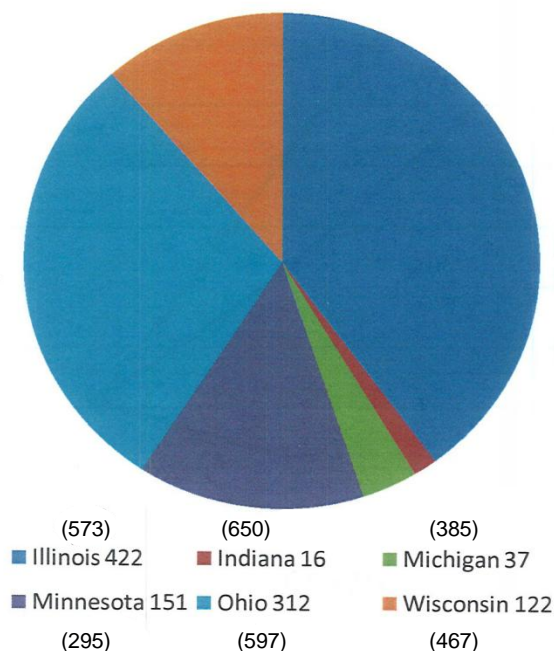


Comparison of Region 5 States Permitting Program Status compiled by U.S. EPA Region 5 for March 10, 2011 State Environmental Directors Meeting



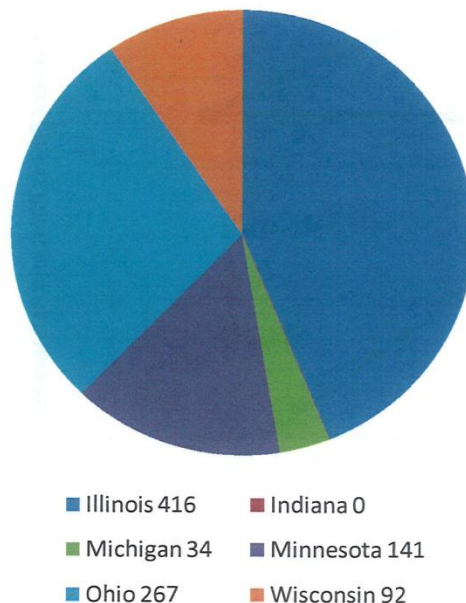
Region 5 Title V Renewal Permit Backlog

Backlog as of
January 1, 2011

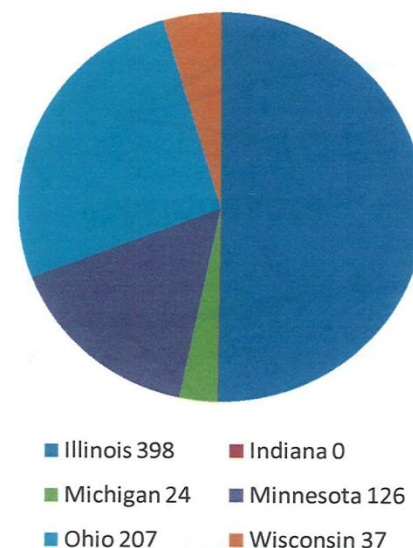


(Total Number of Title V Permits)

End of Calendar
Year 2011

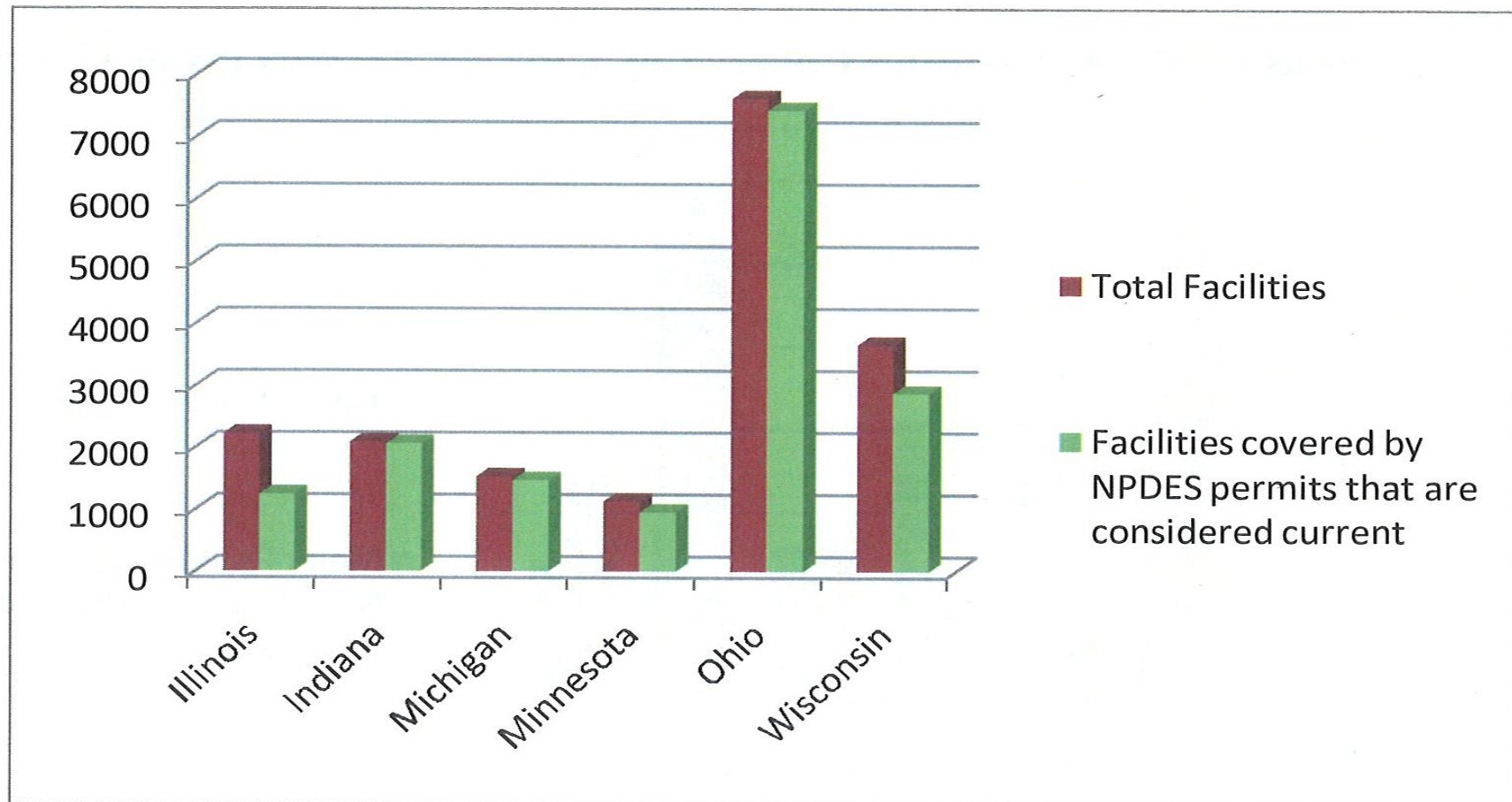


End of Calendar
Year 2012



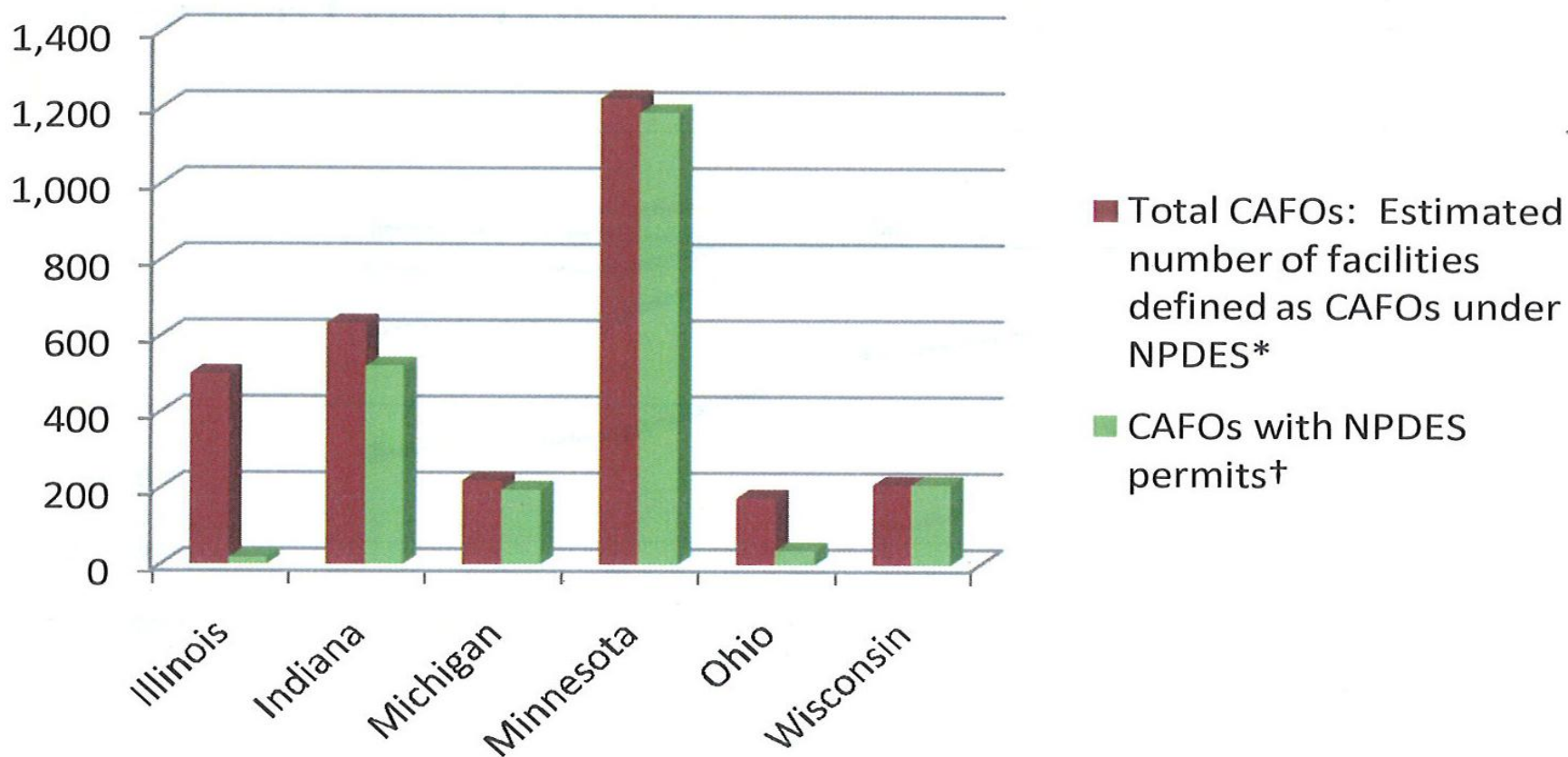


Status of Facilities Covered by Current Permits (as of 12/31/10)





Status of State CAFO Universe with Permits (as of 3/2/11)





IDEM EQSC Annual Report 2011



IDEM's Mission

We Protect Hoosiers and Our Environment

IDEM's mission is to implement federal and state regulations to protect human health and the environment while allowing the environmentally sound operations of industrial, agricultural, commercial and government activities vital to a prosperous economy.



How Does IDEM Protect Hoosiers and Our Environment?

- Develop regulations and issue permits to restrict discharges to the environment to safe levels.
- Inspect and monitor permitted facilities to ensure compliance with the permits.



How Does IDEM Protect Hoosiers and Our Environment?

- Use compliance assistance and/or enforcement when people exceed their permit levels or violate regulations.
- Educate people on their environmental responsibilities.



Performance Metrics July 2011

	Result	Target	Comments	
Quality of Hoosiers' Environment				
% of Hoosiers that live in counties that meet air quality standards	99.99%	100%	80%	Lead in a small portion of Muncie 94+9 (103) out of 99+9 (108)
% of CSO Communities with approved programs to prevent the release of untreated sewage	95.4%	100%	20%	
% of Hoosiers that receive water from facilities in full compliance with safe drinking water standards	98.46%	99%	95%	

Permitting Efficiency

Total calendar days accumulated in issuing environmental permits, as determined by state statute

Land	22,009	66,565	86,864
Air	77,864	208,000	385,000
Water	56,716	48,000	200,000

* Places emphasis on back logged permits

Compliance

Total percentage of compliance observations from regulated customers within acceptable compliance standards

Inspections	97.20%	97%	75%
Self reporting	98.23%	99%	95%
Continuous monitoring (COM)	99.77%	99.9%	99.0%

* Tracks observations and not just inspections



Performance Metrics June 2005

Quality of Hoosiers' Environment

% of Hoosiers in counties meeting air quality standards

Result

Target

Comments

61%

100%

80%

12 counties & 2,408,571 of 6,195,643 above standard

% of CSO Communities with approved programs to prevent the release of untreated sewage

4%

100%

20%

75% by 2007 is goal

Permitting Efficiency Total calendar days accumulated in issuing environmental permits, as determined by state statute

Land

100,013

66,565

86,864

Air

511,000

207,000

385,000

Water

301,000

48,000

200,000

* Places emphasis on back logged permits

Compliance Total percentage of compliance observations from regulated customers within acceptable compliance standards

Inspections

95.46%

97%

75%

Self reporting

97.11%

99%

95%

Continuous monitoring (COM)

99.19%

99.90%

98.95%

* Tracks observations and not just inspections

Organizational Transformation Budgetary agency dollars spent on **key** outside contracts for core agency functions.

Dollars spent on outside services per year

\$6,179,367

\$0

\$3,447,017



Office of Water Quality Accomplishments

- **NPDES Permit Backlog Reduction**
 - 2005: 263 Administratively Extended Permits
 - 2011: 22 Administratively Extended Permits
 - Oldest Recently Issued Includes:
 - US Steel Midwest. Issued 1/31/2011
 - ArcelorMittal Burns Harbor. Issued 2/7/2011
 - Hoosier Merom. Issued 12/22/2010
 - Oldest Remaining:
 - ArcelorMittal Indiana Harbor East.
 - ArcelorMittal Indiana Harbor West.



Office of Water Quality Accomplishments

- **NPDES Permit Backlog Reduction (cont.)**
 - Of the 20 remaining administratively extended Permits:
 - 13 do not meet EPA's definition of administratively extended as they are less than 180 days past the expiration date.
 - 11 have been public noticed and are close to being issued.
 - 8 submitted their renewal application late.



Office of Water Quality Accomplishments

- **Combined Sewer Overflow Reductions**
 - 108 Communities with Combined Sewers.
 - 93 Communities have IDEM –approved LTCPs.
 - 15 Communities remain to have their LTCPs approved. Of those, 10 are in an enforceable mechanism to get their LTCPs developed and implemented and 5 are in negotiations with EPA and IDEM for the development and implementation of their LTCPs.
 - 27 Communities have completed the implementation of CSO controls.



Office of Water Quality Accomplishments

- **Antidegradation Rule**
 - Federal Requirement that allows point source discharges to waters under specific circumstances.
 - Indiana law defines how we make the allowances and rules address the implementation of the law.



Office of Water Quality Accomplishments

- Antidegradation (Cont.)
 - The current rule applies only to the Great Lakes Basin.
 - The proposed rule will apply state-wide and:
 - Increases public opportunities for input,
 - Protects swimmable/fishable uses of waters,
 - Allows for the issuance of legal permits for discharges to waters, and
 - Does not allow for the violation of water quality standards.



Office of Water Quality Accomplishments

- **Antidegradation (Cont.)**
 - Legislative changes mandated by House Enrolled Act 1162 have been incorporated.
 - Stakeholder work groups held over two years.
 - Four public meetings held around the state.
 - Rule 'Second Noticed' in Indiana Register.
 - Many comments received.



Office of Water Quality Accomplishments

- **Antidegradation (Cont.)**
 - IDEM streamlined and revised the rule.
 - IDEM met with major stakeholder groups to explain changes.
 - Draft rule presented to Water Pollution Control Board for preliminary adoption July 27th—decision continued to September 19th meeting.
 - Rule will be ‘Third Noticed’ in Indiana Register.
 - EPA must approve the final rule and currently is satisfied with IDEM’s proposed rule.



Office of Water Quality Accomplishments

- **Blue Green Algae Initiative**
 - Increasing Public Awareness.
 - Concerns from citizens around Geist Reservoir in 2007.
 - Senator Gard urged agencies to investigate.
 - Partnership among ISDH, IDNR, IUPUI Center for Earth and the Environmental Science to collect and report information.



Office of Water Quality Accomplishments

- **Blue-Green Algae Initiative (Cont.)**
 - 2009 EQSC report recommended expanded sampling of lakes.
 - State Blue-Green Algae Initiative:
 - IDEM has built in-house capacity to analyze the algae.
 - IDEM sampled **five** DNR managed lakes in the first year.
 - IDEM expanded sampling to **11** DNR managed lakes this year.
 - ISDH/IDEM developed a communication protocol featuring:
 - Updated website
 - ISDH hotline
 - ISDH press releases when necessary.



Office of Water Quality Accomplishments

- **Blue-Green Algae Initiative (Cont.)**

- Long term goals:

- Evaluate the costs and resources necessary for dramatically expanded sampling.
- Use the information as an indicator to help provide information to the public and protect Hoosiers and the Environment.
- Collect information that will help assess water quality.
- Incorporation of cyanobacteria and microcystin into IDEM's Water Quality Monitoring Strategy.
- Strengthen state agency partnerships.



Office of Air Quality

Goal: Continue to Improve Air Quality

As Federal air quality standards are tightened, ongoing assessment and planning are necessary:

1. Each episode of elevated concentrations is analyzed for cause and contribution.
2. Rulemaking is focused on pollutants of concern and supported by technical analysis.
3. Emission reduction initiatives and voluntary actions are promoted via internal and external partners (OPPTA, Partners for Clean Air, etc.)



Office of Air Quality (Regulatory Actions Summary)

State and federal actions targeting continued air quality improvement:

1. Cross-State Air Pollution Rule (Clean Air Interstate Rule replacement). Finalized by U.S. EPA July 2011.
2. Consumer and Commercial Products (Indiana-2010).
3. Architectural, Industrial and Maintenance Coatings(Indiana-2010).
4. Outdoor Hydronic Heaters (Indiana-2011).
5. Maximum Achievable Control Technology (MACT) for industrial, commercial, and institutional boilers. Finalized by U.S. EPA February 2011.
6. Maximum Achievable Control Technology (MACT) for electric utilities. Proposed by U.S. EPA March 2011.



Office of Air Quality (Rulemaking Initiatives 2011-2012)

IDEM Rules Website: <http://www.in.gov/idem/4087.htm>

• *Users may subscribe to receive information about rules, permits, and other public notices.*

Key Air Rulemakings in Progress:

1. Cross-State Air Pollution Rule.
2. Boiler and utility MACTs.
3. Redesignations for Fine Particles
4. Article 2 Initiative and related rulemakings (Permitting Rules).
 - External public work group.
 - Objectives are to enhance clarity and increase efficiency of permitting process.



Office of Air Quality Recent Accomplishments (Measured Air Quality)

1. Ambient air quality continues to improve for all pollutants that there are standards in place for.
 - IDEM is working with Exide to bring an isolated portion of Delaware County into compliance with the new lead standard.
 - U.S. EPA established a new 1-hour standard for sulfur dioxide that will be a challenge for a number of Indiana counties.
 - This standard relies on modeling more so than monitoring.



Office of Air Quality Recent Accomplishments (Measured Air Quality)

- National Ambient Air Quality Standards (NAAQS) for ozone and particulate matter are scheduled to be revised.
-
2. U.S. EPA is proceeding to approve Indiana's redesignation petitions under the annual standard for fine particles now that the Cross-State Air Pollution Rule is in place.



Office of Air Quality Recent Accomplishments (Compliance and Enforcement)

Clean Air Interstate Rule (CAIR)

- Processed CAIR Energy Efficiency/Renewable Energy (EE/RE) Results for the 2010 Ozone Season and the 2010 Annual Control Period.
- Redistributed leftover CAIR EE/RE allowances, leftover Hardship allowances and leftover New Non Electric Generating Units (EGUs) Allowances for the 2010 Ozone Season and 2010 Annual Control Period, to the EGUs.



Office of Air Quality Recent Accomplishments (Compliance and Enforcement)

- Processed CAIR allowance applications for New EGUs for the 2011 Ozone Season and 2011 Annual Control Period.

Cross-State Air Pollution Rule (CSAPR)

- CAIR will be implemented through 2011 compliance periods – CAIR then replaced by CSAPR.
- CSAPR establishes new allowances for all programs – There is no carryover of the Acid Rain Program, NOx SIP Call/NOx Budget Program, or CAIR Allowances.



Office of Air Quality Recent Accomplishments (Compliance and Enforcement)

Compliance Assistance Program at Permitted Sources

- Offered to all first time or renewal Title V, FESOP, or MSOP permittees along with significant source modifications.
- Air inspector travels to source and explains permit requirements, what to look for, how to help manage the permit requirements, and what to expect during an IDEM inspection.
- Focus is to increase compliance at permitted sources.



Office of Air Quality Recent Accomplishments (Compliance and Enforcement)

Compliance Assistance Program at Permitted Sources—Continued

- 746 letters sent offering program in last 3 years.
- 84 of the sources took advantage of the program plus an additional 33 that were aware of the program.
- Sources that took advantage of the program have a 6% better compliance rate.



Office of Air Quality Recent Accomplishments (Compliance and Enforcement)

Expedited Enforcement Pilot Project

- Quick resolution of straight forward violations that merit small civil penalty (\$500)
- 27 cases used expedited enforcement (approximately 19% of all enforcement cases)
- Reduced average time to resolve a case by 80 days (approximately 33% reduction)
- OAQ considering other types of violations suitable for Expedited Enforcement



Office of Air Quality Recent Accomplishments (Air Permitting)

- Reduced backlog from 157 permits on 1/1/08 to 1 remaining on 7/1/11, which is on hold at the request of the applicant.
- The air permit workload increased from 280 pending permits on 6/30/10 to 394 permits pending on 7/1/11.
- Permit processing efficiency increased during the same period. In 2011 permits are issued in 92% of the allowable calendar days compared to 95% in 2010.
- Efficiency measurement today is based on calendar days in process, not permit days.



Office of Air Quality Mint Farms

- Currently there are 11 Mint Farms across Northern Indiana.
- The farms produce a concentrated mint oil extract by steam distillation and subsequent separation of mint oil from the mint plant itself.
- No emission factor exists to determine Volatile Organic Compound (VOC) emissions for air permit applicability.
- House Enrolled Act No. 1451 required that a study be conducted of the actual and potential air emissions from the distillation of mint.



Office of Air Quality Mint Farms

- In May 2011, IDEM awarded a contract to test VOC emissions at the Lawrence Farm.
- The test was conducted on July 27, 2011.
- Preliminary test results indicate that there are some VOC emissions from mint distilling, we expect final quality assured test results in August.



Office of Air Quality GHG Air Permits

- All permits issued after 6/30/2011 that increase GHG emissions by 75,000 tpy need GHG BACT and all sources with GHG emissions of at least 100,000 tpy need operating permits.
- U.S. EPA has deferred requiring GHG permits for the CO₂ emissions from biogenic sources until July 2014 while it gathers more data on how to regulate CO₂ emissions from these sources.
- Through the rulemaking process IDEM has obtained the legal authority to issue the federally required GHG permits.



Office of Land Quality Accomplishments

- GM Bankruptcy settlement for \$25,174,482 to be utilized to address environmental issues at 8 GM plants in Indiana.
- Remediation of 2 units at Continental Steel completed with expectation entire site remediation will be completed by year end.
- Constructed and implemented an aggressive cleanup system for soil and ground water at Univeritical in Angola using a combination of private, local and state funds.



Office of Land Quality Accomplishments

- Secured a \$14 million settlement to remediate the Cam-Or Superfund Site in Westfield.
- Increased the number of “Tier 2” chemical inventory reports submitted electronically from 1350 to over 4500.



Office of Land Quality Permitting

- Issued 717 permit decisions last fiscal year.
- 58% of the decisions were relative to Confined Feeding permits.
- On average the decisions were issued in 60% of the time required under the statute based on calendar days.



Office of Land Quality Permitting

- Significant Decisions
 - Merom Station Expansion Coal Ash Disposal Landfill, Sullivan County.
 - Soil Solutions Waste Wood Processing Facility, Elkhart County.
 - ArcelorMittal Burns Harbor industrial waste landfill.



Office of Land Quality Rulemaking

- CFO / CAFO Rule Revisions.
- Temporary Storage and Management of Lead Acid Batteries.



IDEM 2011 GOALS AND CHALLENGES



2011 IDEM Major Goals

- Complete Antidegradation Rulemaking Process.
 - Draft rule is available for public review.
 - WPCB Preliminary Adoption Meeting July 27, 2011, action postponed to September 19, 2011.
- Obtain U.S. EPA approval of attainment designations for PM_{2.5} for all of Indiana.
 - Evansville proposed May 23, 2011.
- Complete CAFO/CFO Rulemaking Process.
 - Preliminary Adoption May 11, 2011.
- Adopt RISC Closure Guidance as an NPD.
 - Released for public comment May 6, 2011.



2011 IDEM Challenges

- Reissue NPDES General Permits Administratively and address antidegradation requirements.
- Provide Information to EQSC on:
 - IDEM program funding and costs.
 - Mint farm air emissions.
 - Possible responsibilities and funding sources for Solid Waste Management Districts.
- Attainment designations for new SO₂ Standard.



2011 IDEM Challenges

- Respond to U.S. EPA's reconsideration of the 0.075 ppm ozone standard.
- Other possible U.S. EPA decisions such as 316(b) cooling water intakes, no CCW decision.
- Develop plan for seamless implementation of water program responsibilities currently assigned to: IDEM, ISDH, IDNR, OISC, ISDA, and possibly U.S. EPA (UIC) and U.S. ACE (404).



Air Quality and Asthma Trends (Statewide)

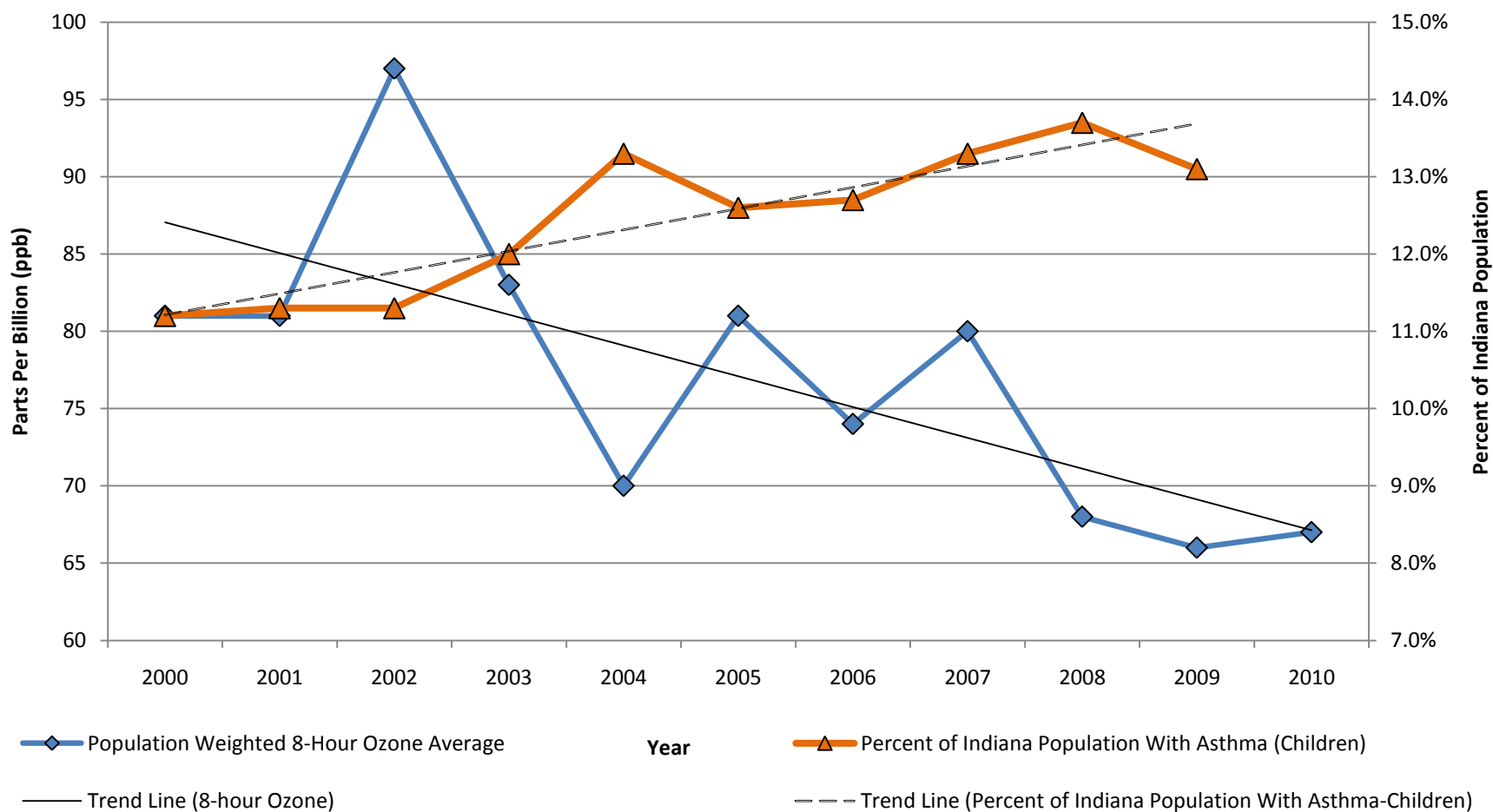


Population Weighted Ozone Trend Compared To Adult Asthma Trend



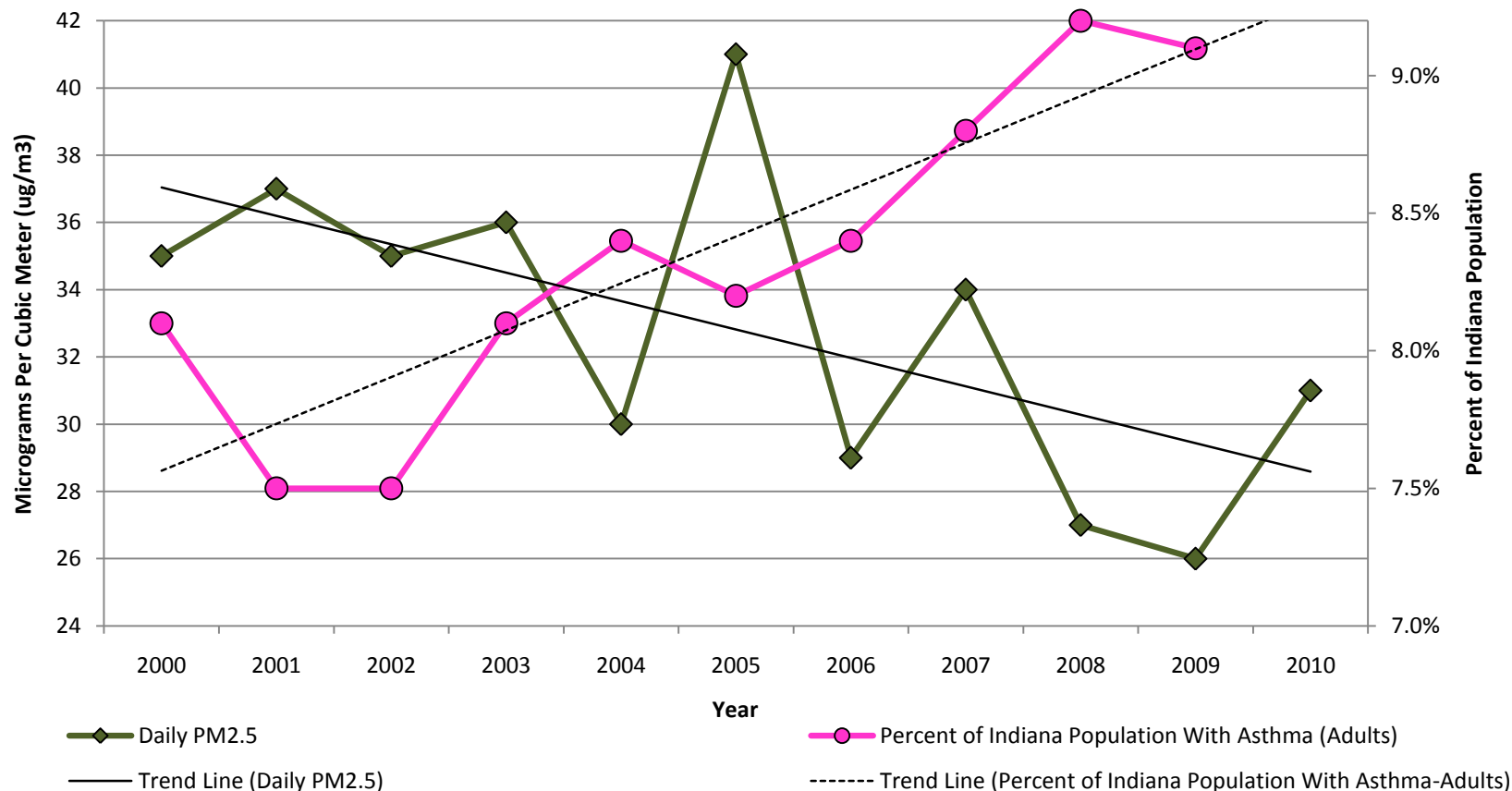


Population Weighted Ozone Trend Compared To Children Asthma Trend



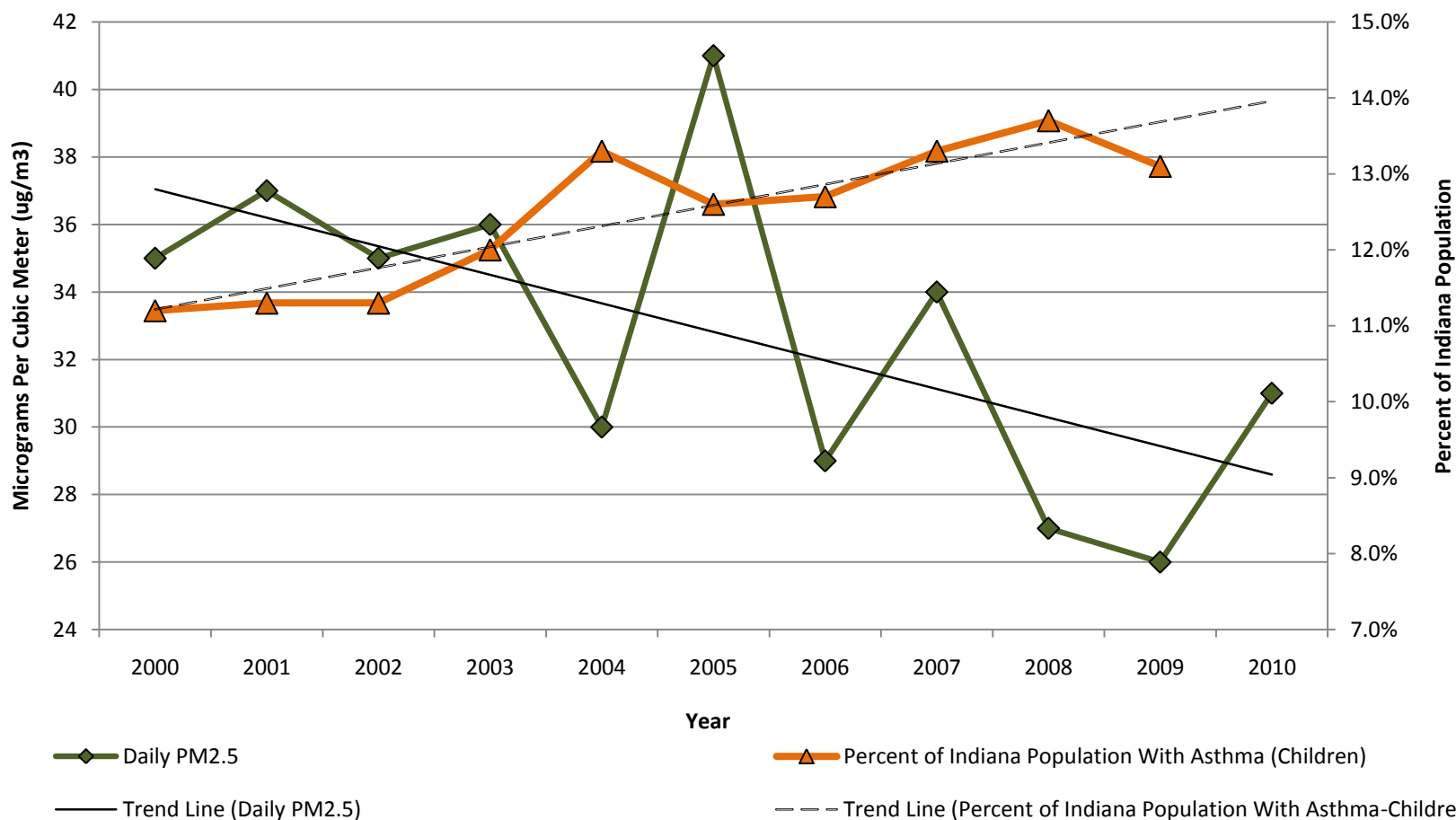


Population Weighted Particulate Matter (PM_{2.5}) Trend Compared to Adult Asthma Trend





Population Weighted Particulate Matter (PM_{2.5}) Trend Compared To Children Asthma Trend





of Protecting Hoosiers and Our Environment



Questions?



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